

IN THE CLAIMS:

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Please amend claim 44 as follows:

44. (amended) A pumping device for delivering and metering medical fluids comprising:

- a. a membrane unit having a first membrane bordering a first chamber;
- b. a membrane pump head mounted on the membrane unit, the membrane pump head having a second chamber bordered by the first membrane on the side opposite the first chamber, the second chamber having an inlet and an outlet for conveying medical fluids;
- c. a pumping unit connected to the first chamber by a hydraulic unit containing hydraulic fluid in fluid connection with the first chamber;
- d. a hydraulic sensor in fluid connection with the hydraulic unit, the hydraulic sensor adapted and arranged for measuring the pressure of the fluid within the hydraulic unit;
- e. a measuring device for measuring the pumping unit output; and
- f. a control unit connected to the measuring device, the pumping unit, and the hydraulic sensor, wherein the control unit is adapted and arranged for controlling the pumping unit output based on the measurements of the measuring device, and wherein the control unit is adapted for shutting off the pumping unit in response to a measured pressure outside a predetermined range;

wherein movement of fluid in the first chamber induces movement of fluid in the second chamber.